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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,351	06/23/2003	Yoshifumi Kato	5000-5107	1830
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MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101				
			EXAMINER PERRY, ANTHONY T	
			ART UNIT 2879	PAPER NUMBER

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/602,351

Applicant(s)

KATO, YOSHIFUMI

Examiner

Anthony T. Perry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The Amendment filed on 4/18/2005, has been entered and acknowledged by the Examiner.

New claim 20 has been added.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language:

Claims 1, 3, 4, 6, 7, 11, 13, 15, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Jones (US 5,920,080).

Regarding claim 1, Jones teaches a color display in Fig. 3 that comprises a substrate (130) an organic electroluminescent display device including an organic electroluminescent layer (300), a passivation film (540), a color filter (520) located on the passivation film (540), and a mar-proof protective film (510) coating the color filter to protect it from damage.

Regarding claim 3, the organic electroluminescent display device includes an organic electroluminescent layer (300) between a first electrode (202) and a second transparent electrode (251) such that the first electrode (202) is located between the substrate (130) and the electroluminescent layer (300) (see Fig. 3).

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Regarding claim 4, Jones teaches an active drive element (120) is located on the substrate (130) and is covered by the first electrode (202) (see Fig. 3).

Regarding claim 6, Jones teaches a white light emitting electroluminescent layer (col. 11, lines 10-12).

Regarding claim 7, Jones teaches a blue light emitting electroluminescent layer wherein the color filter has a color changing layer (col. 10, line 57 – col. 11, line 14).

Regarding claim 11, Jones teaches a color display in Fig. 3 that comprises a substrate (130) an organic electroluminescent display device including an organic electroluminescent layer (300), a passivation film (540), a color filter (520) located on the passivation film (540), and a mar-proof protective film (510) coating the color filter to protect it from damage. The organic electroluminescent display device includes an organic electroluminescent layer (300) between a first electrode (202) and a second transparent electrode (251) such that the first electrode (202) is located between the substrate (130) and the electroluminescent layer (300) and the second electrode (251) is located between the passivation film (540) and the electroluminescent layer (300) (see Fig. 3).

Regarding claim 13, Jones teaches the display comprising an active drive element (120) located on the substrate (130) so that the first electrode (202) covers at least a part of the active drive element (120) (see Fig. 3).

Regarding claim 15, Jones teaches a white light emitting electroluminescent layer (col. 11, lines 10-12).

Regarding claim 16, Jones teaches a blue light emitting electroluminescent layer wherein the color filter has a color changing layer (col. 10, line 57 – col. 11, line 14).

Claims 1, 3-4, 6, 11, 13, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Roitman et al. (US 6,552,488).

Regarding claim 1, Fig. 5 of the Roitman reference discloses a color display that comprises a substrate (313) an organic electroluminescent display device including an organic electroluminescent layer (135), a passivation film (120), a color filter (115) located on the passivation film (120), and a mar-proof protective film (161) coating the color filter (115).

Regarding claim 3, the organic electroluminescent display device includes an organic electroluminescent layer (135) between a first electrode (339) and a second transparent electrode (337) such that the first electrode (339) is located between the substrate (313) and the electroluminescent layer (135) (see Fig. 5).

Regarding claim 4, Roitman et al. teach an active drive element (351) located on the substrate (313) and covered by the first electrode (339) (see Fig. 5).

Regarding claim 6, teaches a white light emitting electroluminescent layer (col. 5, lines 7-11).

Regarding claim 11, Roitman et al. teach a color display in Fig. 5 that comprises a substrate (313) an organic electroluminescent display device including an organic electroluminescent layer (135), a passivation film (120), and a color filter (115) located on the passivation film (120). The organic electroluminescent display device includes an organic electroluminescent layer (135) between a first electrode (339) and a second transparent electrode (337) such that the first electrode (339) is located between the substrate (313) and the electroluminescent layer (135) and the second electrode (337) is located between the passivation

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film (120) and the electroluminescent layer (135), and a mar-proof protective film (161) coating the color filter (115) (see Fig. 5).

Regarding claim 13, Roitman et al. teach the display comprising an active drive element (351) located on the substrate (313) so that the first electrode (339) covers at least a part of the active drive element (351) (see Fig. 5).

Regarding claim 15, teaches a white light emitting electroluminescent layer (col. 5, lines 7-11).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (US 5,920,080).

Regarding claims 5 and 14, Jones does not specifically teach the active drive elements located on the same plane as the organic electroluminescent device disclosed in Fig. 3. However, it has been held that rearranging of parts of an invention involves only routine skills in the art. *In re Japikse*, 86 USPQ 70. For example, Jones teaches an alternative to the substrate assembly (100) disclosed in Fig. 3, where the substrate assembly includes a glass substrate with a TFT (active drive element) located on top (see col. 7, lines 23-26), in which case the first conductor of the organic electroluminescent device would be on the same plane as the active drive elements. Accordingly, it would have been obvious to one having ordinary skills in the art

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at the time the invention was made to have formed the active drive elements on the same plane as the organic electroluminescent device in order to decrease the thickness of the overall display, since rearrangement of parts of an invention is considered within the skills of the art.

Claims 2, 5, 12, 14, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roitman et al. (US 6,552,488).

Regarding claims 2 and 12, Roitman does teach that conventional deposition methods of protective films are performed at 300 degrees Celsius, and that using such methods would damage or destroy most EL materials, which typically do not survive temperatures of 140-160 degrees Celsius and above. Roitman states that “cool” dielectric semiconductor deposition processes (ones where the substrate is not heated above 140 degrees) should be used. Roitman does not specifically state the use of an ultraviolet curing acrylic resin as the mar-proof protective film coating. However, the use of UV-curable acrylic resins as hard coats (mar-proof protective film coatings) is well known in the art, especially in cases where previously deposited layers would be vulnerable to subsequent heating processes (see Other Prior Art Cited section for evidence).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an ultraviolet curing acrylic resin, which is cured with UV rays after being deposited on the color filter, since Roitman teaches that a “cool” dielectric deposition process should be used for forming the protective layer and that UV-curable acrylic resins used as protective hard coats are well known for their ability to be formed under conditions that do not

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damage previously deposited layers while at the same time providing a protective coating material with sufficient hardness and resistance to outside elements.

Regarding claims 5 and 14, Roitman does not specifically teach the active drive elements located on the same plane as the organic electroluminescent device. However, it has been held that rearranging of parts of an invention involves only routine skills in the art. *In re Japikse*, 86 USPQ 70. Thus, it would have been obvious to one having ordinary skills in the art the time the invention was made to have formed the active drive elements on the same plane as the organic electroluminescent device in order to decrease the thickness of the overall display, since rearrangement of parts of an invention is considered within the skills of the art.

Regarding claim 20, Fig. 5 of the Roitman reference discloses a color display that comprises a substrate (313) an organic electroluminescent display device including an organic electroluminescent layer (135), a passivation film (120), a color filter (115) located on the passivation film (120), and a protective film (161) coating the color filter (115). Roitman further teaches that conventional deposition methods of protective films are performed at 300 degrees Celsius, and that using such methods would damage or destroy most EL materials, which typically do not survive temperatures of 140-160 degrees Celsius and above. Roitman states that “cool” dielectric semiconductor deposition processes (ones where the substrate is not heated above 140 degrees) should be used. Roitman does not specifically state the use of an ultraviolet curing acrylic resin as the protective film coating. However, the use of UV-curable acrylic resins as hard coats (protective film coatings) is well known in the art, especially in cases where previously deposited layers would be vulnerable to subsequent heating processes (see Other Prior Art Cited section for evidence).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an ultraviolet curing acrylic resin, which is cured with UV rays after being deposited on the color filter, since Roitman teaches that a "cool" dielectric deposition process should be used for forming the protective layer and since the use of UV-curable acrylic resins as protective hard coats is well known for its ability to be formed under conditions that do not damage previously deposited layers while at the same time providing a protective coating material having sufficient hardness and resistance to outside elements.

Claims 8-9 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (US 5,920,080) as applied to claims 1 and 11 above, and further in view of Taguchi et al. (US 5,099,172).

Regarding claims 8-9 and 17-18, Jones does not specifically teach the substrate having a light reflectance equal to or less than 10%. However, Fig. 8 of the Taguchi et al. reference discloses an EL device that includes a substrate comprising a glass substrate (1) with a black sheet (10) on its surface in order to increase the contrast of the display (col. 8, lines 6-7). Accordingly, it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used a substrate with a blackened surface (substrate having less than 10% reflectance) in order to increase the contrast of the display.

Claims 8-9 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roitman et al. (US 6,552,488) as applied to claims 1 and 11 above, and further in view of Taguchi et al. (US 5,099,172).

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Regarding claims 8-9 and 17-18, Roitman et al. do not specifically teach the substrate having a light reflectance equal to or less than 10%. However, Fig. 8 of the Taguchi et al. reference discloses an EL device that includes a substrate comprising a glass substrate (1) with a black sheet (10) on its surface in order to increase the contrast of the display (col. 8, lines 6-7). Accordingly, it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used a substrate with a blackened surface (a substrate having less than 10% reflectance) in order to increase the contrast of the display.

Claims 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (US 5,920,080) as applied to claims 1 and 11 above, and further in view of Osawa et al. (US 5,892,492).

Regarding claims 10 and 19, Jones does not specifically state that the color filter is made of organic materials. However, Osawa et al. teach that organic color filters show sharper changes in transmittance than inorganic material color filters (col. 6, lines 50-60). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use organic material color filters so as to ensure high color purity and contrast ratio of the primary colors.

Claims 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roitman et al. (US 6,552,488) as applied to claims 1 and 11 above, and further in view of Osawa et al. (US 5,892,492).

Regarding claims 10 and 19, Roitman does not specifically state that the color filter is made of organic materials. However, Osawa et al. teach that organic color filters show sharper

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changes in transmittance than inorganic material color filters (col. 6, lines 50-60). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use organic material color filters so as to ensure high color purity and contrast ratio of the primary colors.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sun et al. (US 6,072,198) and Young (US 6,561,640) both teach blackening a surface of transparent substrates in order to improve the contrast of a display.

Nomura et al. (US 6,320,309) teaches that inorganic material color filters have a reduced tinting strength compared to organic material color filters.

Matsunaga et al. (US 6,861,121), Miyatake et al. (US 6,773,121), Yoneda et al. (US 6,579,737), and Takahashi et al. (US 5,561,208) teach advantages of using UV-curable acrylic resins as hard coat layers including: easy processing operation for efficiently forming protective coating layers; shortened curing times compared with thermosetting resins; ability to be cured/formed under conditions that do not damage previously deposited layers while providing sufficient hardness and resistance to outside elements; etc.

Response to Arguments

Applicant's arguments filed 4/18/05 have been fully considered but they are not persuasive. With respect to the arguments that the references of Jones and Roitman et al. do not anticipate the specific mar-proof protective film coatings listed in the Applicant's specification, the Examiner notes that only the limitation of a mar-proof protective film coating the color filter

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to protect it from damage is claimed. Both Jones and Roitman et al. teach a member satisfying this limitation (see above rejections).

Applicant's arguments with respect to claims 2, 12, and 20, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is **(571) 272-2459**. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

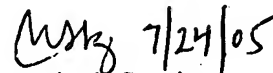
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-24597. **The fax phone number for this Group is (571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Anthony Perry
Patent Examiner
Art Unit 2879
July 22, 2005



Mariceli Santiago
Primary Examiner
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